National Park Service
U.S. Department of the Interior

Timpanogos Cave National Monument
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American Fork, Ut 84003

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Timpanogos Cave National Monument

Museum Housekeeping Plan

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Timpanogos Cave National Monument
American Fork, Utah

Produced by the Division of Publications
National Park Service

U.S. Department of the Interior
Washington, DC

By: Camille Pulham, 2004

Cover photo Accession #215

Approved by Superintendent Date

Prepared by Park Ranger- Resource Management Date

Reviewed by Chief Ranger Date

Reviewed by Chief of Maintenance Date

Contents

Introduction

Museum artifacts give us insight into our past. Maintaining these items will preserve the link to our history for generations to come. Housekeeping is vital to the preservation of museum objects. It can be described as the ongoing actions or tasks that are taken to preserve museum objects, archives, and museum records. The goal of housekeeping and cleaning is to perpetuate and preserve the museum collections and artifacts.

The monument has developed this Museum Housekeeping Plan to ensure consistent, long-term care of its museum collections. It is the product of a cooperative effort between all divisions and has the approval of the Superintendent at Timpanogos Cave National Monument. By implementing this housekeeping program, we will minimize the need for conservation treatment. Housekeeping, when it is executed faithfully and with professional judgment, is crucial to the preservation of museum objects.

Good housekeeping will minimize the deterioration of historic objects by focusing of preventative care. This plan will outline a preventative conservation program aimed at preserving museum objects and minimizing the need for conservation treatment. It will be accomplished by defining potential problems, such as light, temperature, and air pollution, identifying tasks to be completed that will mitigate those problems, outlining procedures and personnel necessary to fulfill these tasks, scheduling when those tasks will be implemented, as well as the proper equipment and supplies to be used in the museum. This plan will also allow the monument to meet National Park Service standards and mandates for collection care.

Discretion and sensitivity must be used in following any housekeeping program. Care and maintenance should be based on the need and condition of the object. The frequency of cleaning and museum maintenance will vary throughout the year and is dependant upon visitation levels, seasons, and the collection's exposure to detrimental environments.

Collection Description

This is an example of the Timpanogos Cave Museum collection in a storage cabinet

The collection at Timpanogos Cave National Monument consists of:

Historic artifacts such as photographs, objects, and documents pertaining to the caves, the Monument, and American Fork Canyon, which have been donated, transferred, or purchased.

Natural History items include cave formations, herbarium collection, animal specimens and study skins, and bones from paleontological digs and surface finds.

Archeological artifacts consisting of the corncobs, extracted from the Monument's Native American archeological site behind residence #9, and items found during the fill removal project in Hansen Cave.

Archival materials include photographs, negatives, audio/video items, books, newspaper articles, and documents.

All museum items at Timpanogos Cave National Monument are stored in the Curatorial Storage room. A collection of 44 nitrate negatives are being stored at Western Archeological and Conservation Center (WACC) and 11 animal study skins collected by the USGS I&M Program are being stored at the Museum of Southwestern Biology at the University of New Mexico. There are cave formations on display at the visitor center, they have not been accessioned nor cataloged. Since they are not museum property they will not be included in this plan.

STAFFING

This Housekeeping Plan is based on the current staffing levels, the collection status, and the collection location. A seasonal, collateral-duty Curator from the Resource Management division presently is responsible for managing the museum collection. Changes in museum personnel or collection status may require altering responsibility for the tasks presented in the plan. As changes occur the plan will be updated to reflect existing conditions.

The curator has been given the responsibility for the collection's maintenance and management, under the supervision of the Chief Ranger and the Superintendent. This responsibility includes overseeing the day-to-day operations of the museum, curatorial functions, and caring for the collections. The museum curator must have current training in curatorial methods and cataloging procedures, as well as preservation methods and techniques, and the Automated National Catalog System (ANCS+). This employee performs collection maintenance, and provides support staff with the appropriate training to carry out their collections maintenance duties.

The Superintendent is ultimately responsible for the museum collections. The Superintendent, with the advice of the museum curator, must approve all of the collections procedures, policies, tasks, and maintenance. Decisions related to preservation and conservation may need to be made with the assistance of the regional curator and/or a conservator.

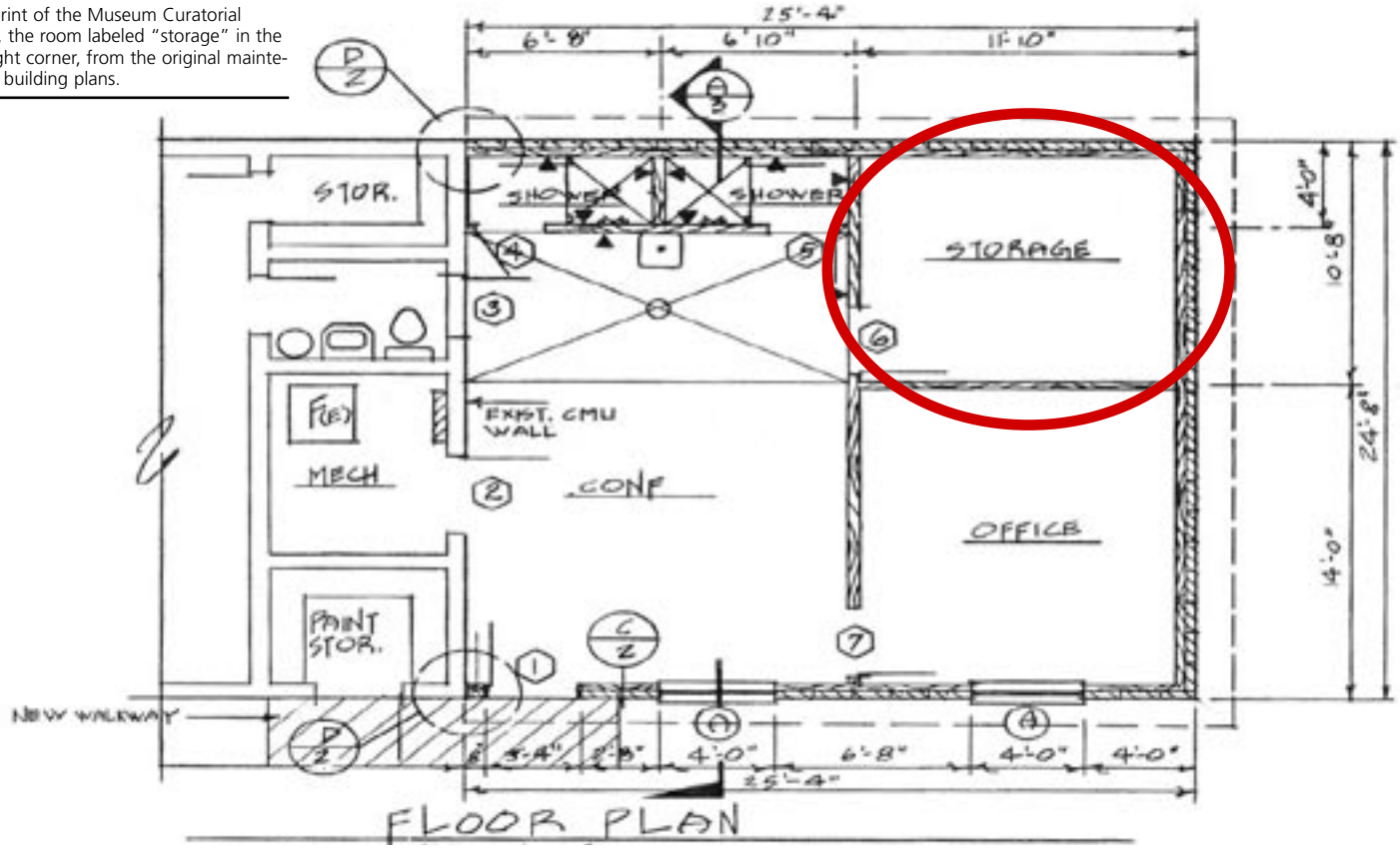
Additional training in the areas of collection management and archives may benefit the curatorial staff, assisting them in understanding housekeeping methods and expanding on existing knowledge. Possible coursework or training may be available through the National Park Service or:

Campbell Center for Historic Preservation Studies
203 East Seminary
Mt. Carroll, IL
815-244-1619

Smithsonian Center for Education and Museum Studies
900 Jefferson Drive SW
Washington D.C.

Winedale Museum Seminar
TX Historical Commission
P.O. Box 11
Round Top,TX 78954
979-278-3530

Utah Museum Association
P.O. Box 2077
Salt Lake City, UT 84110



Blue print of the Museum Curatorial Room, the room labeled "storage" in the top right corner, from the original maintenance building plans.

Museum Collection Storage and Equipment

Timpanogos Cave National Monument's museum collection is located within the Curatorial Room, the southwestern room of the Maintenance Building. The Curatorial Room has approximately 103 sq. ft and contains:

- six standard museum storage cabinets
- one full height herbarium cabinet
- one flammable liquids container
- one fire-resistant file cabinet
- four two-drawer card catalog units
- three map cabinets
- several archival document boxes

Currently, the monument's catalog backlog objects are stored on top of the storage cabinets and map cabinets. There are 42 nitrate negatives on permanent loan to the Western Archeological Conservation Center, and 12 animal specimens at the USGS Museum of Southwestern Biology at the University of New Mexico in Albuquerque, NM for storage purposes.

The Curatorial Room and the Maintenance Building's office are fully carpeted, while the Maintenance Building's break room, restroom, and the furnace room have floors of painted concrete.

There are four electrical outlets in the Curatorial Room, one on each wall, but museum cabinets block two of the outlets.

A security alarm system and a fire detection (heat and smoke) system are located in the Curatorial Room as well as the maintenance building's office and break room. There is an ABC fire extinguisher located on the northern wall of the room.

The laptop computer [Golden Arrow], dedicated solely for curatorial use, provides access to the ANCS+ program and allows fir curatorial functions to be completed in the museum or Resource Management office. Museum literature and supplies are located in the closet of the small west office in the Rock House. More museum supplies are stored in the root cellar behind the Rock House. Alcohol used for the preservation of wet specimens is also stored there in a locked flammable cabinet.

There is not a dedicated curatorial office/work area. The break room, when it has been properly cleaned, acts as a curatorial work area. When more space is required, to properly perform any museum duties or research, the table in the Rock House conference room can also be used.

Curatorial Room Environment

Storing museum objects in a stable environment reduces the rate of deterioration...thereby preserving the values for which they were collected.

Storing museum objects in a stable environment reduces the rate of deterioration and minimizes the need of conservation treatments, thereby preserving the values for which the objects were collected. The practice of environmental monitoring and control ensures that optimum conditions are being maintained. Museum Handbook, Part I Chapter 4 outlines the four environmental agents that are grouped under the term environment: temperature, relative humidity, light, and air pollution. This may also include dealing with pests.

The Monument's museum reference files, particularly in the subjects of museum housekeeping, Integrated Pest Management (IPM), environmental monitoring, individual catalog records, and conservation are also valuable to understanding the conditions affecting the collections. These files create a history of the collection and its environment, and can be used to determine conservation needs and other problem solving methodologies if collections are found to be deteriorating.

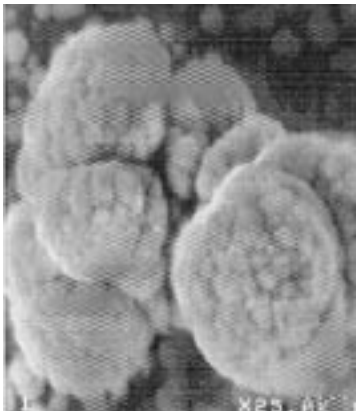
Light

Light has the potential to damage sensitive organic materials. Light causes molecular breakdown, resulting in fading colors, bleaching of paper, yellowing of varnish, and the loss in other physical properties such as the weakening of materials. The ideal light levels for museum objects should not exceed 200 lux and ultra-violet light should not exceed 75 W/lumen.

Ultra-violet light, or UV light, is the most chemically damaging segment of the light spectrum. The high energy of UV light can cause significant alteration to any organic materials. UV filters are preventative measures that have been installed on the florescent lights. These filters must be monitored for their effectiveness and periodically replaced. Other future options may include electronic motion sensors to turn the lights on and off or moving objects and cases to areas with less light.

Light readings are to be taken on a semi-annual basis, at different times of the day to ensure levels are within the recommended range. These readings will be taken with a lux light meter and an ultra-violet monitor. The monument currently owns an ultra-violet light meter and a visible light meter for monitoring and recording light levels. If the levels are found to be outside the recommended range, measures are to be taken to resolve the problem. All changes made in the curatorial room should be documented for future reference

Microscopic dust particles



Dust and Air Pollution

Dust particles are microscopic abrasives that can wear away surface detail and finishes on objects. Dust attracts moisture, gaseous pollutants and salts such as sulfur dioxide, hydrogen sulphide and sodium chloride. These can then form corrosive solutions that attach to most materials when in combination with moisture. There are no acceptable levels of dust and pollution. Dust needs to be eliminated to the greatest degree possible.

Prevention is better than treatment. Good housekeeping involves consistent and thorough dusting and vacuuming of museum collection storage areas. Well-sealed storage cabinets protect most objects in the collections, but a small quantity of dust does enter. Dusting in the storage area as well as museum objects themselves must occur at least quarterly (See Appendix B).

Temperature and Relative Humidity

This is a HOBO datalogger located in the Museum Storage Room. It records temperature, relative humidity, and takes light readings.

Changes in relative humidity and temperature can damage objects through physical stress and chemical deterioration. High humidity can cause mold and corrosion in some materials and organic materials will gradually disintegrate and discolor. Incorrect temperatures that are too high cause gradual disintegration of organic materials, while temperatures that are too low causes embrittlement and results in fractures of paint and other polymers.

There are slow, rolling variations in temperature and relative humidity over the course of a year that are unavoidable in the Curatorial Room; however, seasonal changes in RH should not exceed 5% per month and temperature change should not exceed $^{+}/_{-}$ 10° F per month and stored in the museum files.

A HOBO H8 RH/Temp/Light Datalogger that takes readings every 15 minutes monitors the Curatorial Room's environment. The User's Manual for the datalogger is located in the Owner's Manual folder in the Museum Files drawer of the desk in the west office in the Rock House. The Museum Curator downloads and analyzes the data once a month

The only active environmental control for the Curatorial Room is a furnace located adjacent to the break room. As a result, the Curatorial Room's environmental conditions are largely subject to change as the outside environment conditions fluctuate.

The Curatorial Room's door and the air in the break room insulate the Curatorial Room, reducing the effects of the outside environment. Given that the break room's and the Curatorial Room's doors remain closed, with no one inside the Curatorial Room, environmental conditions within the Curatorial Room vary within an appropriate level of $^{+}/_{-}$ 5° F and $^{+}/_{-}$ 5% RH per day. Even while working in the museum with the Curatorial Room door open, if the break room door remains closed the environmental changes in the Curatorial Room are tolerable. In short, reducing temperature and relative humidity fluctuations in the break room is integral to stable environmental conditions in the curatorial room.

Fans have been used in the museum with no appreciable effect on the curatorial room's temperature or humidity.

The Curatorial Room door should not be opened during events of high humidity. Doing so causes the humidity to drastically increase in the Curatorial Room.

Box Elder Bug
Leptocoris trivittatus

Deer Mouse
Peromyscus maniculatus

Pest Procedures

Insects, rodents, and reptiles can cause extensive damage to organic materials. Dermestid Beetles, Powder-Post Beetles, Carpet Beetle and Silverfish actively devour wool, wood, leather, and cellulosic materials. Rodents may destroy wood, paper, and other organic objects in the process of nest building. Nests attract insects. Rodents and insect droppings and urine may stain and etch the surface of many objects and materials. In addition, pests that are not damaging to the collection, such as Box Elder Bugs, may create a food source for more damaging creatures and must be eliminated.

Thorough housekeeping will contribute to reducing the number of pests entering the collection area. Keeping the room clean and removing the source of food, moisture, and nesting materials will aid in protection of museum items. Cleaning all areas on a regular basis removes most food and nesting sources. No pesticides are to be used in the building.

The most effective way of preventing infestations is to keep storage areas clean. The presence of the maintenance break room adjacent to the Curatorial Room creates a special challenge. The break room should be cleaned on a daily basis. All food should be stored in the refrigerator or in sealed plastic containers. No garbage cans should be located in the curatorial room or near the curatorial room's door. Nearby garbage cans need to be emptied nightly. Floors should be swept, sinks, counters, and tables wiped down, and bins emptied. These tasks should be carried out after the lunch period to avoid leaving food in that area overnight when many pests become active; this involves the cooperation of the Maintenance staff.

Conducting a monitoring program, using sticky traps for insects and rodents snap traps, determines the types of insects and rodents that are present, their quantities, and possible entry points. Captured insects and rodents should be identified so as to determine the potential for damage to the collection.

Sticky traps must be set in places that will assist in determining points of entry, numbers, and types of insects. These traps should be placed in storage areas, the break room, and maintenance office. This will aid in identifying entry locations. Traps should be inspected and renewed bi-monthly; if traps aren't changed, the dead insects in the traps will become a food source for other pests. Regularly checking the traps will help to indicate when an infestation began, and provide clues as to the origin of the infestation. Records of pest problems are kept on file that will include the pest type, date, location, and trap type. The data is interpreted annually to detect trends in infestation.

The collections will be monitored for rodent damage. If a need is shown, rodent traps will be set by doors, in corners, near vents, and on top of all shelves. Numbers and frequency will be recorded and filed to detect trends. Rodents are a potential health hazard; always dispose of the traps properly to lessen the possibility of Hanta Virus (See also NPS Conserv-O-Gram 2 and 8) .

If a pest infestation should occur, the regional support office IPM Coordinator should be contacted immediately for solutions to the problem. The support office IPM Coordinator must approve any pesticide use. Infestations should be swiftly dealt with before they spread throughout the collection. Records of infestations should be kept in the Monument IPM files.

General Rules for Handling Objects

Always wear clean gloves when handling objects.

1. Always prepare a space to set the object before moving. A table should be padded and uncluttered. Quilted furniture moving pads can be used as padding for the table. Floor space should be clearly marked to alert staff and visitors to avoid any obstacles that may be in the area.

2. Carefully handle the object to avoid breakage, denting, and scratching. Never handle objects hurriedly. Always be certain that a clear path for movement is available. For larger objects, enlist sufficient pairs of hands. Schedule enough time to complete the task.

   Always wear clean, white cotton gloves when handling objects (except for glazed ceramics and glass). Fingerprints leave deposits of dust, moisture, oils, and acids. Fingerprints may damage porous and metal surfaces. Damage may not become apparent for several years. When handling glazed ceramic and glass items use Nitrile or Latex gloves or bare, clean, dry hands. Fingerprints will not harm the surface and objects may be gripped more securely.

   Gloves are to be cleaned when they are soiled. Wash the gloves only in Ivory soap and do not use bleach.

3. Carry only one object at a time, completely supporting it from beneath and sides. Never pick up an object by the handles or any protruding part. These may not be secure. Never stack objects or allow them to roll around in a box while they are being moved. Do not allow objects to protrude from carrying devices.

4. Moving an object from high places using a ladder requires the use of two people. The object should be carefully removed by the person on the ladder and then handed to the person on the ground before climbing down the ladder. Loose parts should be transferred separately or firmly affixed.

5. If an object is damaged, report it immediately to the Museum Curator. Save all fragments in Ziploc bags, boxes, or acid free tissue to keep small fragments together and protect them from further damage.

Specific Conservation Considerations

1. Objects should never be placed near air vents. Direct heat can dry out wood, textiles, leather, and paper objects. Relocating the object is the best solution; occasionally the vent can be closed.

2. Light sensitive objects should not be left exposed to light for extended periods of time.

3. Inspect metals to detect fresh corrosion/oxidation. If deterioration is detected, contact a metals conservator.

Cleaning Instructions

Museum Objects are cleaned differently than modern buildings and equipment. Knowing when ***not*** to clean can be as important as knowing when and how.

Knowing when not to clean can be as important as knowing when and how.

Dusting

Routine dusting must be carried out in order to avoid serious conservation problems. Dirty museum items generally do not accurately reflect the historic scene or aesthetic intent of the maker; dust is also abrasive to the surface of an object and can damage glass, wood, and metal surfaces.

Conduct all other cleaning duties before dusting objects. Vacuum floors and dust the tops and beneath cabinets before dusting the objects inside to avoid deposition of larger quantities of dust from these areas.

When dusting, apply minimal pressure, and move carefully in order to avoid damaging the surface of the object. Change cloths often. Be aware that too frequent dusting wears the finish off items. Use soft, clean, white cloths and camel hairbrushes for dusting. Frequently shake the accumulated dust from the cloth, outside of the building. Machine wash the dusting cloths after they become moderately soiled and rinse the camel hairbrushes in clean water following each use and allow them to dry.

Never use damp dust cloths on objects.

Feather dusters are not recommended for dusting because they scatter dust into the air and broken feathers can scratch the surface of museum items. A soft artist brush can be used to dust the bindings of books.

Quarterly dusting is advised of the Curatorial Room. Spaces beneath cabinets and shelving should be vacuumed. A thorough dry (wet only when necessary) cleaning of floors, walls, ceiling and cabinetry in the storage area should be conducted semiannually. Lighting fixtures should also be cleaned at this time.

Vacuuming

Vacuuming the Curatorial Room is performed using an upright vacuum. Before beginning, be certain that the vacuum is clean. Empty or replace filter bag before using if needed. A clogged or full bag is not efficient in picking up dirt and will shoot dust back out of the exhaust port. Only the carpet should be cleaned with the vacuum. Spot cleaning should only be done when necessary.

When removing the plug from the outlet, always grasp and pull the plug, not the cord. Pulling on the cord could cause it to break, resulting in possible shock. This could also cause the plug to whip around causing damage to museum items and to the user.

Presently there is not a vacuum designated for the museum. One needs to be purchased for the Curatorial Room that has a HEPA filter.

Wet Cleaning

Wet cleaning removes adherent dirt and grime that cannot be removed by dusting. Wet cleaning should be only used on the floor and should never be used for the general museum collection unless advised by a conservator and documented on the object's catalog file.

Baseboards should be wet cleaned only when necessary to avoid trapping water, which may attract pests. The walls should be washed every five years with a mild biodegradable detergent and water using sponges. The walls should be repainted as needed.

Other Procedures

Light bulbs and florescent tubes should be inspected regularly and replaced promptly when spent. Ensure appropriate UV filters are placed on the replacement bulbs or tubes.

Storage cabinet seals, locks and gaskets should be inspected quarterly. Any broken or malfunctioning part should be repaired or replaced. Any damaged parts should be reported to the Museum Curator.

A conservator should be consulted every five years to inspect objects to determine whether conservation treatment or maintenance is necessary.

Fire can be one of the greatest threats to collections. Fire prevention can begin with good housekeeping. A no smoking policy has been established inside of the Curatorial Room as well as all federal building. The building currently does not have a fire suppression system. An ABC fire extinguisher is mounted to the North wall in the Curatorial Room, the Maintenance Break Room, and all the Maintenance bays.

Appendix A

HOUSEKEEPING SCHEDULE

Daily

1. Wash dishes, clean table top and sink in break room
2. Spot clean carpet in Curatorial Room if necessary
3. Empty all waste bins in the break room
4. Sweep the maintenance break room

Weekly

1. Mop maintenance break room
2. Vacuum floor in the Curatorial Room, including crevices
3. Clean baseboards in Curatorial Room
4. Inspect heating filters and replace if necessary

Monthly

1. Monitor pest traps, record numbers and replace if necessary
2. Clean soiled gloves in Ivory soap
3. Download, analyze, clear and replace Datalogger, file graphs
4. Inspect all cabinets with a flashlight for signs of insect infestation, corrosion and other forms of deterioration

Quarterly

1. Dust the tops of cabinets in the Curatorial Room
2. Check seals, gaskets, and locks of museum cabinets to ensure they are in a functional condition

Semiannually

1. Take visible and ultraviolet light meter readings, replace filters if necessary
2. Dust and clean lighting fixtures and vents

Annually

1. Clean entire Curatorial Room area including beneath cabinets to avoid debris build up
2. Analyze annual Datalogger information to determine trends and identify problem areas
3. Calibrate Datalogger
4. Wet clean carpet
5. Analyze pest trap data to determine trends and identify problem areas
6. Change batteries in the Datalogger

TASK CALENDARS

MONTHLY CURATORIAL TASKS

TASK/MONTH First Monday of the month	Date & Initial	Date & Initial	Date & Initial	Date & Initial	Date & Initial	Date & Initial	Date & Initial	Date & Initial	Date & Initial	Date & Initial	Date & Initial	Date & Initial
Monitor pest traps, record numbers, and replace if necessary												
Clean soiled gloves in Ivory soap												
Download, analyze, clear and replace Datalogger, file graphs												
Inspect all cabinets with a flashlight for signs of insect infestation, corrosion and other forms of deterioration												

Comments:

QUARTERLY CURATORIAL TASKS

TASK/MONTH First Monday of the Month	Date & Initial	Date & Initial	Date & Initial	Date & Initial
Dust the tops of cabinets in the Curatorial Room Mar, June, Sept, Dec				
Check seals, gaskets, and locks of the museum cabinets to ensure they are in functional condition Mar, June Sept, Dec				

Comments:

SEMIANNUAL AND ANNUAL CURATOR TASKS

TASK/MONTH First Monday of the month	Date & Initial	Date & Initial	Date & Initial	Date & Initial
Dust and clean lighting fixtures and vents May, Oct				
Check wet specimens, fill if necessary May, Oct				
Take visible and ultraviolet light meter readings, replace filters if necessary May, Oct				
Clean entire Curatorial Room area including beneath cabinets to avoid dust and dirt build up May				
Analyze annual Datalogger information to determine trends and identify problem areas Sept				
Calibrate Datalogger Sept				
Wet clean carpet Sept				
Analyze pest trap data to determine trends and identify problems June				

Comments:

Daily Task Schedule

TASK	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
Sweep maintenance break room														
Wash dishes, clean table top and sink in the break room														
Spot clean carpet in Curatorial Room if necessary														
Empty all waste bins in the Curatorial Room and in the break room														

Comments:

Weekly Task Schedule

TASK	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
Vacuum floor in collection storage, including crevices														
Clean baseboards in Curatorial Room														
Inspect heating filters and replace if necessary														
Mop maintenance break room														

Comments:

Appendix B

NATIONAL PARK SERVICE
MHP REFERENCE SHEET

ENVIRONMENTAL CONCERNS

Location: Maintenance Building Curatorial Room, TICA

Temperature: Gradual fluctuations occur seasonally. Maintenance staff who make major adjustments to climate control equipment need to be consulted with curatorial staff.

Relative Humidity: Relative humidity must be controlled by monitoring the Curatorial Room and Maintenance Building door which provides immediate access to the outside, allowing air and humidity to enter the Curatorial Room. Open doors must be monitored and keep closed as much as possible.

Light: There are no windows that exist in the Curatorial Room. The Curatorial Room is equipped with fluorescent lighting. Light bulbs are covered by UV filters.

Pest Monitoring: No insect infestations have been recorded to date. Park curatorial staff arranges for removal of these insects from collection areas. Pests are identified and dealt with accordingly.

Dust/pollution: Dust levels are relatively low because concrete driveways provide access to the Curatorial Room. Maintenance staff is responsible for keeping dust levels low in their office area to prevent it from entering curatorial area.

Tasks**:**

- Monitor temperature and relative humidity. Monthly.
- Monitor sticky traps for pests. Monthly.
- Monitor condition of objects. Monthly.
- Inspect cabinets and drawers. Monthly.
- Monitor floors for dust and dirt (Curatorial Room and Maintenance Break Room). Monthly.

NATIONAL PARK SERVICE
MHP REFERENCE FILE SHEET

EQUIPMENT/SUPPLIES USED TO CONTROL THE ENVIRONMENT

Location: Maintenance Building Curatorial Room, TICA

Type of Equipment/Supplies:

- HEPA Vacuum
- Dusting cloths
- HOBO data logger
- Mop and broom
- Pest control sticky traps
- Alcohol

Location of Supplies: Maintenance building supply closet.

Tasks:

- Vacuum: Purchase replacement bags and filters annually. Change bags monthly. Change filter annually.
- Dusting cloths: Purchase replacement cloths annually. Clean or replace monthly.
- HOBO data logger: Maintain monthly. Replace if not functioning properly.
- Mop and broom: Maintenance staff will maintain as needed for the purpose of keeping the maintenance office area clean.
- Pest control sticky traps: Purchase replacement traps quarterly. Change traps as needed.
- Wet specimens: Maintain alcohol levels in wet specimen vials semi-annually. Replace alcohol when needed.

NATIONAL PARK SERVICE
MHP TASK SHEET

DUSTING

Location**:** Maintenance Building Curatorial Room, Maintenance Break Room

Task**:** Clean cabinets and drawers. Dust objects in cabinets. Dust Maintenance Break Room.

Frequency**:** Monthly. Before dusting, carefully inspect objects and cabinets to decide if cleaning is necessary. Dust Maintenance break room monthly.

Procedure:

- ❑ Dust Maintenance break room table, lockers, and equipment.
- ❑ Dust outside of cabinets with soft dust cloth.
- ❑ Prepare space on table to receive objects.
- ❑ Remove objects from cabinet.
- ❑ Dust cabinet drawer with soft dust cloth. Give special attention to corners, using an artist's brush to dust.
- ❑ Dust objects as needed.
- ❑ Replace items in correct drawers.
- ❑ Wash dust cloths and brushes at first sign of darkening.

Cautions**:**

- ❑ Use cloth gloves when handling museum objects and specimens.
- ❑ Do not clean rough edged objects with dust cloth.

Currently Assigned to: Museum Curator, Maintenance Staff

Supplies/Equipment:

- ❑ Soft artist's brush
- ❑ Soft dust cloth
- ❑ Nitrile/Latex gloves
- ❑ Cotton gloves
- ❑ Table
- ❑ Furniture pad
- ❑ Task light

NATIONAL PARK SERVICE
MHP TASK SHEET

PEST MONITORING

Location: Maintenance Building Curatorial Room

Task: Monitor for pests

Frequency: Monthly

Procedure:

- Inspect traps from previous month. Carefully place used traps inside plastic bags and seal, with attention given to location and trap number.
- Prepare new pest traps; sticky traps and mousetraps as needed.
- Write the location and number on each trap.
- Put new traps into position.
- In work area (outside of Curatorial Room), count numbers of each insect type and record location and type data.
- Take action as needed if a specific area has an infestation.

Cautions**:**

- When mousetraps are used, identify location and discard trap and rodent properly should any be caught.

Currently Assigned to: Museum Curator

Special Skills/Training:

- Identify insects and rodents.

Supplies/Equipment:

- Sticky pest traps
- Snap traps
- Record sheets and/or database access

NATIONAL PARK SERVICE
MHP TASK SHEET

ENVIRONMENTAL MONITORING

Location: Maintenance Building Curatorial Room, TICA

Task: Monitor temperature and relative humidity

Frequency: Monthly

Procedure:

- ❑ Obtain HOBO datalogger shuttle.
- ❑ Download data from HOBO datalogger to data logger shuttle.
- ❑ Download data logger shuttle information onto computer.
- ❑ Analyze data for any abnormal fluctuations in temperature and/or relative humidity.
- ❑ Take appropriate action to maintain stable environmental conditions.

Currently Assigned to: Museum Curator

Special Skills/Training: Operation of data logger equipment and computer software.

Supplies/Equipment:

- ❑ Data logger shuttle
- ❑ Data logger for Curatorial Room
- ❑ Computer (Office or laptop)

NATIONAL PARK SERVICE
MHP TASK SHEET

VACUUMING, SWEEPING AND MOPPING

Location: Maintenance Building Curatorial Room, Maintenance Break Room, TICA

Task: Vacuum floor in Curatorial Room, sweep and mop floor in Maintenance Break Room.

Frequency: Curatorial Room- Monthly, Break Room- Daily

Procedure:

- Obtain vacuum from maintenance supply.
- Vacuum Curatorial Room floor using attachments to reach underneath cabinets and corners.
- Sweep and mop Maintenance break room floor.
- Vacuum Maintenance office.

Currently Assigned to: Museum Curator, Maintenance Staff

Supplies/Equipment:

- HEPA Vacuum with attachments
- Mop and bucket
- Broom with dust pan
- Cleaning agent for maintenance break room floor mopping

NATIONAL PARK SERVICE
MHP TASK SHEET

WET SPECIMENS

Location: Maintenance Curatorial Room, TICA

Task: Maintaining Wet Specimens

Frequency: Quarterly

Procedure:

- Check wet specimen vials for correct alcohol levels
  1 part distilled water, 3 parts ethanol
- If alcohol needs to be added to specimen vials, mix correct alcohol/water solution and refill vials to correct level.
- Record date, corrected vials, and other appropriate information.

Currently Assigned to: Museum Curator

Special Skills/Training:

- Must have experience mixing solutions and knowledge of correct solution formulas.

Supplies/Equipment:

- Ethanol
- Distilled water

NATIONAL PARK SERVICE
MHP TASK SHEET

REVIEW HOUSEKEEPING PLAN

Location: Resource Management Office, TICA

Task: Review Housekeeping Plan

Frequency: Annually (May)

Procedure:

- Assess currency of plan. If changes (based on observation and experience with plan) are needed to improve implementation, circulate the revised plan to appropriate reviewers.
- If necessary, revise to keep plan current with changes in technology and procedure. Make copies for formal review.
- Distribute plan for review. Allow a minimum of three weeks for review.
- Incorporate comments as appropriate into plan.
- Route for formal signature.

Currently Assigned to: Museum Curator, Resource Management Staff

Special Skills/Training:

- Familiarity with museum objects and the structure and their respective requirements.
- Knowledge of NPS Museum Standards, housekeeping needs, and agents of deterioration.

Supplies/Equipment:

- None

Appendix C

Suppliers

HEPA Vacuum

Nilfisk of America
University Products

Dust Magnets

Conservators Emporium
Conservations Resources International
Light Impression
Talas
University Products

Natural Hair Brushes

Fine art supply stores
Talas
University Products

Scalpels

Conservators Emporium
Conservation Resources International
Talas
University Products

Tweezers, Insect traps, UV filters, Cotton Gloves

Conservators Emporium
Tools of the Trade

Cotton Swabs

Drug stores, chemical suppliers, etc. (Do not use swabs with plas tic shafts)

Everclear Alcohol

Utah State Liquor stores

Cotton cloths

Cloth diapers are 100% cotton and are available from a diaper service

Supplier Addresses

Conservators Emporium
100 Standing Rock Circle
Reno, NV 89511
702-852-0404
www.consemp.com

Conservation Resources International, LLC.
8000-H Forbes Place
Springfield, VA 22151
800-634-6932
www.conservationresources.com

Light Impressions
P.O. Box 940
Rochester, NY 14603-0940
800-828-6216
www.lightimpressiondirect.com

Metal Edge, Inc
6340 Bandini Blvd.
Commerce, CA 90040
www.metaledgeinc.com

Nilfisk of America
300 Technology Drive
Malvern, PA 19355
213-647-6420
www.pa.nilfisk-advance.com

University Products
517 Main St.
P.O. Box 101
Holyoke, MA 01041-0101
800-628-1912
www.universityproducts.com

Utah State Liquor Store
114 S State
Orem, UT 84058
801-225-0119

Appendix D

List of Contacts

Support Office Curators:

Matthew Wilson, Curator
Intermountain Regional Support Office—Denver
P.O. Box 25287
Denver, CO 80225-0287
PH: 303-987-6690
FAX: 303-969-2675

Virginia Salazar-Halfmoon, Regional Curator
Intermountain Regional Support Office—Santa Fe
2968 Rodeo Park Drive, West
Santa Fe, NM 87501
PH: 505-988-6813
FAX: 505-988-6875

IPM Coordinator

Gerald McCrea, Integrated Pest Management Coordinator
Intermountain Support Office—Santa Fe
P.O. Box 728
Santa Fe, NM 87502-0728
PH: 505-988-6829
FAX: 505-988-6025

NPS Conservation Agencies

Western Archaeological and Conservation Center
255 N Commerce Park Loop
Tucson, AZ 85745
PH: 520-670-6501
FAX: 520-670-6525

Harpers Ferry Center
Division of Conservation
P.O. Box 50
Harpers Ferry, WV 25425
PH: 304-535-6228
FAX: 304-535-5055

Appendix I
Environmental Screening Form

Project Description/Location:

Museum Housekeeping Plan

The Museum Housekeeping Plan is designed to outline the maintenance and cleaning of the Museum Curatorial Room, located in the Maintenance building.

	Yes	No	Data Needed to Determine
Mandatory Criteria (A-M). Would the proposal, if implemented:		X	
A. Have material adverse effects on public health or safety?		X	
B. Have adverse effects on such unique characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands; floodplains; or ecologically significant or critical areas, including those listed on the National Register of Natural Landmarks?		X	
C. Have highly controversial environmental effects?		X	
D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		X	
E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		X	
F. Be directly related to other actions with individually insignificant, but cumulatively significant, environmental effects?		X	
G. Have adverse effects on properties listed or eligible for listing on the National Register of Historic Places?		X	
H. Have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have adverse effects on designated Critical Habitat for these species?		X	

	Yes	No	Data Needed to Determine
I. Require compliance with Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act?		X	
J. Threaten to violate a federal, state, local, or tribal law or requirement imposed for the protection of the environment?		X	
K. Involve unresolved conflicts concerning alternative uses of available resources (NEPA see. 102(2)(E)?		X	
L. Have a disproportionate, significant adverse effect on low-income or minority populations (EO 12898)?		X	
M. Restrict access to and ceremonial use of Indian sacred sites by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007)?		X	
N. Contribute to the introduction, continued existence, or spread of federally listed noxious weeds (Federal Noxious Weed Control Act)?		X	
0. Contribute to the introduction, continued existence, or spread ofnon-native invasive species or actions that may promote the introduction, growth or expansion of the range of non-native invasive species (EO 13112)?		X	
P. Require a permit from a federal, state, or local agency to proceed, unless the agency from which the permit is required agrees that a CE is appropriate?		X	
Q. Have the potential for significant impact as indicated by a federal, state, or local agency or Indian tribe?		X	
R. Have the potential to be controversial because of disagreement over possible environmental effects?		X	
S. Have the potential to violate the NPS Organic Act by impairing park resources or values?		X	
Tailor the following to meet individual park unit/project needs. Are any measurable impacts possible in the following categories relating to physical, natural, or cultural resources?			
A. Geological resources soils, bedrock, stream beds, etc.		X	
B. From geohazards?		X	
C. Air quality, traffic, or from noise		X	
D. Water quality or quantity		X	
E. Stream flow characteristics		X	
F Marine or estuarine resources		X	

	Yes	No	Data Needed to Determine
G. Floodplains or wetlands	X		
H. Land use, including occupancy, income, values, ownership, type of use	X		
1. Rare or unusual vegetation old growth timber, riparian, alpine, etc	X		
J. Species of special concern (plant or animal; state or federal listed or proposed for listing) or their habitat	X		
K. Unique ecosystems, biosphere reserves, World Heritage sites	X		
L. Unique or important wildlife or wildlife habitat	X		
M. Unique or important fish or fish habitat	X		
N. Introduce or promote non-native species (plant or animal)	X		
0. Recreation resources, including supply, demand, visitation, activities, etc.	X		
P. Visitor experience, aesthetic resources	X		
Q. Cultural resources, cultural landscape, sacred sites, etc.	X		
R. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure, etc.	X		
S. Minority and low-income populations, ethnography, size, migration patterns, etc.	X		
T Energy resources	X		
U. Other agency or tribal land use plans or policies	X		
V Resource, including energy, conservation potential	X		
W. Urban quality, gateway communities, etc.	X		
X. Long-terra management of resources or land/resource productivity	X		
Y. Other important environmental resources?	X		

Please answer the following questions.

1. Are the personnel preparing this form familiar with the site, and/or has a site visit been conducted? (Attach additional pages noting when site visit took place, staff attending, etc.)

The preparer, Cami Pulham, is very familiar with the project and foresees no environmental impacts.

2. Has consultation with all affected agencies or tribes been completed? (Attach additional pages detailing the consultation, including the name, date, and summary of comments from other agency or tribal contacts.)

No other agencies will be affected by this project. Regional Curators Linda Clement and Matthew Wilson were consulted in the writing of this plan.

Instructions
When you have completed a site visit (or if staff are familiar with the specifics of he site) and consultation with affected agencies and/or tribes, and if the answers in the checklist above are all "no", you may proceed to the categorical exclusion form (appendix 2) if the action is described in section 3-4 of DO-12. If any answers in the checklist are "yes" or "data needed to determine," or if the action is not described in section 3-4, prepare an environmental assessment or environmental impact statement.

Attach maps, notes of site visits, agency consultation, relevant data or reports, the categorical exclusion form or other relevant information to this form to begin the statutory/administrative record file.

Signatory
In signing this form, you are saying you have completed a site visit or are familiar with the specifics of the site, that you have consulted with affected agencies and tribes, and that the answers to the questions posed in the checklist are, to the best of your knowledge, correct.

Cami Pulham	10/7/03
Interdisciplinary Team Leader	**Date**
Technical specialist/field of expertise	**Technical specialist/field of expertise**

Appendix 2
Categorical Exclusion Form

Project Museum Housekeeping Plan **Date** 10/7/03
Describe project, including location (reference the attached Environmental Screening Form (ESF), if appropriate):

The Museum Housekeeping Plan is designed to outline the maintenance and cleaning of the MuseumCuratorial Room, located in the Maintenance building.

Describe the category used to exclude action from further NEPA analysis and indicate the number of the category (see section 3-4 of DO-12):

B.(2) Cultural resources maintenance guides, collection management plans, and historic furnishing reports.

Describe any public or agency involvement effort conducted (reference the attached ESF):

The plan was designed by Cami Pulham in accordance to Museum Standards under the consultation of Regional Curators Matt Wilson and Linda Clement. The plan was reviewed by the Superintendent Kit Mullen, Chief Ranger Mike Gosse, and Chief of Maintenance Chris Miller. ESF was prepared; no potential environmental impact is present.

On the basis of the environmental impact information in the statutory compliance file, with which I am familiar, I am categorically excluding the described project from further NEPA analysis. No exceptional circumstances (i.e., all boxes in the ESF are marked “no”) or conditions in section 3-6 apply, and the action is fully described in section 3-4 of DO-12.

April 25, 2004

Park Superintendent or Designee **Date**

Mike Gosse — Chief Ranger
NPS Contact Person **Title**

R. R. 3, Box 200; American Fork, UT 84003 (801) 756-5239, (801) 756-5661 fax
Address **Phone Number**

Appendix G

Bibliography

Conserve O Gram series. Washington D.C.: National Park Service, Museum Management Program.

Lewis, Ralph H. Manuals for Museums. National Park Service. Washington. 1976.

NPS Museum Handbook, Part I

Schultz, Arthur W. Caring for Your Collections. Harry N. Abrams Incorporated. New York. 1992.

Story, Keith. Approaches to Pest Management in Museums. Smithsonian Institution. 1985.